reconsideration of the terminology.

The indefiniteness of claim 2 has also been overcome by rewording the phrases objected to. In claim 7 the objected term "para-amide" has been correct to "para-aramide". The term is disclosed on page 3, line 5 of the originally filed specification.

The applicant respectfully disagrees with the contention that claim 1 to 5 and 8 to 9 are anticipated by Grünbacher et al. (WO96/19395).

Grünbacher et al. fail to disclose a shoulder piece comprising a sealable outlet connection piece and the flange, which flange is attached to the face wall, wherein said shoulder piece is stiff compared to the film material.

Grünbacher et al. discloses a gusset panel which is sealed to the body of the package by a substantially V-shaped seal (23, 24). These V-shaped seals increase the structural strength/rigidity to reduce the flexing of the package near the gusset panel when the cap 41 is removed (page 4, lines 5 to 11). Aside from that, Grünbacher et al. are completely silent about the properties of the material of the gusset panel. It is well known to a skilled person that structural strength/rigidity is increased, if a material thickness is doubled by welding or glueing together two sheets of identical material. Nothing more than that is disclosed.

The disclosure of Grünbacher et al. leads the skilled person to the contrary conclusion that the gusset panel should preferably be made of a material similar to that of the body of the package (page 4, lines 29 to 31).

To summarize, there is no disclosure in Grünbacher et al. that the shoulder piece has to be of stiffer material than the plastic film material. Therefore, amended claim 10 is new over Grünbacher et al.

Grünbacher et al. also fails to disclose that the inner boundaries of the two side edge sections, facing one another in the area of the face wall, are angled or bent to the inside towards one another.

The V-shaped seals 23, 24 are each part of one side edge section. Only the two branches of the V-shaped seal are angled to each other but since these two branches are part of one side edge section -- as argued above -- the inner boundaries of the two side edge sections are not at an angle or bent toward one another. This difference is

clear from a comparison of Fig. 3 of Grünbacher et al. and Fig. 1 of the present application.

Therefore, the feature of the inner boundaries of the two side edge sections facing one another in the area of said face wall, and being angled or bent to the inside towards one another, is new over Grünbacher et al.

Since both amended claim 17 and 18 are based on identical components as the tube claimed in claim 10, the method of use and the process for producing the tube are also new over Grünbacher et al. The same arguments as outlined above are relevant for amended claims 17 and 18.

The applicant considers new claim 10 as being inventive over Grünbacher et al.

Starting from Grünbacher et al. as closest prior art the object of the present invention would have been to provide a tube being capable of standing upright in a filled condition.

That object is solved by a tube comprising a shoulder piece comprising a sealable outlet connection piece and a flange, the shoulder piece being stiffer than the plastic film material; and the tube comprising two side walls with two strip-shaped side edge sections wherein the inner boundaries of these side edge sections which face one another in the area of the face wall, being angled or bent to the inside towards one another.

The teaching of Grünbacher et al. with respect to the gusset panel runs opposite the direction proposed by the present invention.

According to the disclosure at pages 3 - 4 in combination with Figs. 1 - 2 and 4 - 6, this gusset panel can be an integral part of the body of the tube (see the sentence bridging pages 3 and 4, and page 4, lines 29 - 31).

Further, Grünbacher et al. discloses that the seals can be created by any number of methods known in the art, including hot bar heat sealing, impulse sealing, ultrasonic or hot wire (page 5, lines 24 - 25). This disclosure, in combination with that at page 4, lines 31 - 37, leads the skilled person to the conclusion that the material of the gusset panel has to be the same as the material of the body. The requirement of allowing a substantially complete emptying of the tube and the corresponding

teaching of Grünbacher et al., by providing a planar gusset panel would not motivate the skilled person to use material stiffer than the body material. The enhanced stiffness of the gusset panel would prevent a substantially complete emptying of the tube, since the handling and expulsion of the contents of the tube gets more difficult. A gusset panel, made of a stiffer material, would also have prevented the flat arrangement of the gusset panel in the same plane as the body of the package (as required on page 2, lines 27 - 28). The flat arrangement would have been, moreover, even less possible since the seals would have been much stiffer than the material of the gusset panel due to the increase of the thickness of the combined materials.

To summarize, there would have been no motivation to modify the teaching of Grünbacher et al. by using a shoulder piece made of a material stiffer than the material of the tube body.

Grünbacher et al. also teach the V-shaping of the seals as a measure for tapering the tube and therefore achieving a more conventional toothpaste-tube-like shape. The seals are part of the planar gusset panel, which defines the face wall. The seals are further designed in such a way that the package can be folded and the gusset panel will lie flat against and in substantially the same plane as the body (page 3, lines 2 - 3; page 4, lines 12 - 15). A skilled person would recognize that the tip of the V-shaped seals acts like a predetermined folding line, thus preventing a stable upright position of the corresponding tube.

Further, Grünbacher et al. do not provide any teaching to the skilled person for enabling an upright stand of the tube. Grünbacher et al. are completely silent to this problem.

The present invention teaches one to reduce the width of the body in the area of the face wall by providing two strip-shaped side edge sections, whereby their inner boundaries -- in a transition area from the side edge sections to the face wall -- face one another and, simultaneously, these inner boundaries are angled or bent to the inside toward one another stands. The stability of the body as a whole is increased due to this reduction of width.

The teaching of Grünbacher et al. leads in a completely different direction.

The V-shaped seals support the flipping of the face wall toward the body of the tube. A tipping over of the tube would not be prevented, even more to the contrary, tipping over would be enhanced. A skilled person thus would not consider Grünbacher et al. and would not arrive at the present invention.

Since none of these two features is obvious alone from Grünbacher et al., a combination of these features is all the more not obvious in order to solve the problem of providing a tube capable of standing upright in a filled condition.

A tube as claimed in claim 10 is therefore inventive over Grünbacher et al.. It follows that the depending claims referring to claim 10 are also considered patentable.

Claims 17 and 18 are directed, respectively, to a method of using and a method of manufacturing a tube comprising a shoulder piece, wherein the material of the shoulder piece is stiffer than the material of the body material and the tube has a special arrangement of the strip-shaped side edge sections near the area of the face wall.

Since none of these two features is obvious from Grünbacher et al., as discussed above, a method of using and a method of manufacturing are also considered inventive over Grünbacher et al.

We respectfully submit that this application, as amended, is in condition for allowance.

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10. A tube comprising a plastic film material and a shoulder piece,

said plastic film material forming one face wall and two side walls of said tube, wherein the side walls are joined to one another along two strip-shaped side edge sections and along one strip-shaped end edge section, and wherein each of said strip-shaped side edge sections has a width of at least 6.5% of the total width of said side walls, said side edge section width being at least 4 mm,

said plastic film material being a laminate comprising at least one 60-200 micron thick inner seal layer and a 10-25 micron thick outside layer,

said shoulder piece being stiffer than said plastic film material, said shoulder piece comprising a sealable outlet connection piece and a flange, said flange being attached to said face wall,

wherein the inner boundaries of the two side edge sections, facing one another in the area of said face wall, are angled or bent to the inside towards one another.

11. A tube according to claim 10, wherein the flange of the shoulder piece at the edges of the face wall comprises two bent clips, said clips being arranged in the middle areas of the side walls between the two strip-shaped side edge sections.

12. A tube according to claim 10, wherein the inner seal layer consists of polypropylene and/or polyethylene.

13. A tube according to claim 10, wherein the outside layer consists of polyethylene terephthalate and/or polyethylene naphthalate.

14. A tube according to claim 10, further comprising a barrier layer between the inner seal area and the outer layer.

15. A tube according to claim 14, wherein the barrier layer consists of aluminum and has a thickness of 7-12 microns.

~~16. A tube according to claim 14, wherein the barrier layer consists of para-aramide.~~

17. A method of using a plastic bag as a tube, said plastic bag comprising a plastic film material and a shoulder piece,

said plastic film material forming one face wall and two side walls of said tube, wherein the side walls are jointed to one another along two strip-shaped side edge sections and along one strip-shaped end edge section, and wherein each of said strip-shaped side edge sections has a width of at least 6.5% of the total width of said side walls, said side edge section width being at least 4 mm,

said plastic film material being a laminate comprising at least one 60-200 micron thick inner seal layer and a 10-25 micron thick outside layer,

said shoulder piece being stiffer than said plastic film material, said shoulder piece comprising a sealable outlet connection piece and a flange, said flange being attached to said face wall,

wherein the inner boundaries of the two side edge sections, facing one another in the area of said face wall, are angled or bent to the inside towards one another.

18. A process for producing a tube, said process comprising steps of

providing a plastic film material and a shoulder piece, said plastic film material being a laminate comprising at least one 60-200 micron thick inner seal layer and a 10-25 micron thick outside layer,

joining the side walls to one another along the strip-shaped side edge sections, wherein the strip-shaped side edge sections each have a width of at least 6.5% of the total width of the side wall, said side edge section width being at least 4 mm, wherein the strip-shaped side edge sections are welded to one another such that the inner boundaries of the two side edge sections facing one another in the area of the face wall are angled or bent to the inside downward to one another,

connecting said shoulder piece with the face wall, said shoulder piece comprising a closed outlet connection piece and being stiffer than said plastic film material,

filling the tube from the side opposite the face wall, and

closing the side opposite the face wall along one strip-shaped end edge section.